Ex Parte

December 28, 2009
Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

Re: *Ex Parte* Notice
GN Docket Nos. 09-47, 09-51, 09-137

Dear Ms. Dortch:

Pursuant to 1.1206 of the Commission's rules, L. Robert Kimball and Associates is electronically filing this *Ex Parte* in the dockets referenced above. This letter is notice to the Commission that L. Robert Kimball and Associates provided information on Next Generation 911 system costs to Jennifer Manner, Public Safety and Homeland Security Bureau, Deputy Bureau Chief, through e-mail correspondence on December 24, 2009. That communication stemmed from a request from Jennifer Manner on a December 17, 2009 telephone conversation for additional input to the National Broadband Plan relative to Next Generation 911 system costs. Based on these communications we submit these additional *Ex Parte* Comments related to the NBP.

The information attached is derived from information L. Robert Kimball and Associates has compiled from a number of its statewide projects as well as some regional and local systems.

Respectfully Submitted,

/s/
Joel McCamley, ENP
Sr. VP, Division Manager

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Broadband in support of NG9-1-1

L. Robert Kimball & Associates prepared this document at the request of Deputy Bureau Chief Jennifer Manner, Public Safety & Homeland Security Bureau. It contains information compiled from a variety of sources available to Kimball, including statewide NG9-1-1 projects and vendor responses to Request for Proposals. We used that information as the basis from which we extrapolated budgetary pricing for NG9-1-1 at the national, state and local levels.

Next Generation 9-1-1 is based on a hierarchical network of networks. These will most likely end up at the following levels:

- National Network
- State Networks
- Regional / Local Networks

The topology and bandwidth of these networks will vary based on the provider, the network design and weather the services are owned or contract services. For the purpose of this white paper we made several assumptions. These assumptions were:

- Hierarchical networks (National, States, And Regional/Local)
- Approximately equal numbers for each state (Total number of reported PSAPs divided by 56 states)
- Only Transport Charges used based on budgetary costs (No Quotes were requested)
- No Equipment past the Demarcation point was included
- No special construction charges were included
- No PSAP equipment was included
- No Maintenance or monitoring was included
- No Labor or project management was included
- No non-recurring costs were included (most providers will waive non-recurring charges for extended term contracts)
- Based on:
    - 6,190 PSAPs[1]
    - 3,135 Counties[2]
- No additional connections to other stakeholder agencies are included.

As a total the NG9-1-1 broadband network could cost in the area of $1.2 Billion annually to allow connectivity.

National Network	$18,480,000.00
State Networks	$209,664,000.00
Regional/Local Network	$940,500,000.00
TOTAL	$1,168,644,000.00

[1] Based on NENA website http://www.nena.org/911-statistics - Viewed 12/21/09
[2] Based on NENA website http://www.nena.org/911-statistics - Viewed 12/21/09

National Network

A single national network could be deployed to provide interconnectivity to the states and territories. This would consist of 2 data centers for redundancy, and connections to all states.

National Network	
Connectivity between data centers	$8,400,000.00
Connectivity to States and Territories	$10,080,000.00
TOTAL	$18,480,000.00
Assumptions:	
Based on two datacenters in the nation. 2 Connections to 56 State or territory networks. 10 Gbps between the datacenters, and 150 Mbps to each State.	

State Networks

Each state or territory would need a network to connect to each PSAP. For this we took the total number of PSAPs and divided them by 56 states.

State Network	
Connectivity between data centers	$180,000.00
Connectivity to Regions or PSAPs	$3,564,000
TOTAL	$3,744,000.00
Assumptions:	
Based on two datacenters in the state. Connections to 110 Regional networks or PSAPS. 44 Mbps to the PSAPS and Regional Networks and 150 Mbps between the data centers	

Local Networks

A major function of NG9-1-1 is to be able to get information to the responders. To do this the PSAPs will need to have connectivity to these responders. For the purpose of this white paper we has assumed that each county will deploy a network rather than each response entity. This pricing is based on commercially available broadband wireless connectivity.

Regional/Local Networks	
Counties	3,135
Response Units	500
Connectivity to Each Unit	$600
TOTAL	$940,500,000.00
Assumptions:	
Each County deploys a single network. 500 Units per County	

A wireless public safety broadband service may reduce these costs.

Project Estimates

Based on four statewide projects, we have found that the pricing above is in the range of the statewide network referenced above.

Statewide Projects

High	$7,104,000.00
Low	$1,441,296.00
Average	$4,395,601.50

Impacts to Deployment

There are several things that may have an impact on the deployment of NG9-1-1 services. One of the major items is the interconnection of networks. The deployment will most likely be a mix of various network providers and technologies. To operate effectively these various networks must be able to be interconnected. On occasion this interconnection of diverse networks has been an issue with some network providers. Developing cooperation with all providers to include local entities that provide their own networks while protecting these networks will be critical.

Funding for these networks will be critical. Preventing what has occurred with wireless 9-1-1 where after over 10 years we are still only about 95% of the PSAPs in the country capable of taking wireless Phase II calls. Without funding and connectivity many locations may not be able to deploy NG9-1-1.

NG9-1-1 services and database management costs are higher than transport costs. While a good broadband back bone is critical to the deployment of NG9-1-1, that network is useless without the services and data for NG9-1-1.

Based on the four stateside projects used above the following estimates of the percentages of the costs for NG9-1-1 were developed.